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Undescribed Species of Crane-Flies from the Western United States and Canada (Dipt.: Tipulidae)

Part XVI

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The preceding part under this general title was published in ENTOMOLOGICAL NEWS, 66: 125-132, 1955. At this time I am discussing certain species of the genus *Hexatoma*, most of which were sent to me for determination by the late Professor James Speed Rogers, who had received them from the University of Kansas. The types of these species will be returned to the University of Michigan for re-distribution. One further species from Oregon was collected by Mr. Kenneth M. Fender and is preserved in my personal collection of these flies.

Hexatoma (*Eriocera*) *pacifica* new species

Belongs to the *spinosa* group; general coloration gray, the praescutum with four brownish black stripes, additional to the lateral borders; antennae long, approximately twice the length of the body, with long setae virtually to the tip; head and thorax with long erect setae, postnotum and pleura chiefly glabrous; fore femora obscure yellow, with more than the outer half black; wings relatively short and broad; outer radial branches, including R_3 and R_4 , with conspicuous trichia.

♂. Length about 12–14 mm.; wing 14–16 mm.; antenna about 22–25 mm.

Rostrum black; palpi long and conspicuous, black. Antennae of male elongate, nearly twice the body; scape brownish yellow, blackened above, pedicel dark brown, flagellum black; flagellar segments very elongate, the more proximal ones with strong emergence bristles, on the outer segment becoming much longer and more delicate, persisting virtually to the end of the organ. Head dark brown, more fulvous on either side of the large vertical tubercle; vertex with abundant erect setae.

Pronotum brownish gray. Mesonotum grayish yellow, with four brownish black stripes, additional to the darkened lateral borders; each scutal lobe with a comparable brownish black area; scutellum more brownish yellow pollinose, postnotum black; praescutal interspaces and scutellum with conspicuous erect pale setae, postnotum glabrous. Pleura black, with a brownish yellow pollen in places. Halteres dark brown, base of stem obscure fulvous. Legs with all coxae dark brown, trochanters more fulvous beneath; fore femora obscure yellow basally, with more than the outer half black, posterior femora brownish yellow, with about the outer fifth blackened; tibiae and basitarsi reddish brown, tips narrowly darkened; remainder of tarsi passing into black. Wings relatively short and broad, as compared with *solor*; membrane strongly darkened, especially adjoining the veins; stigma darker brown; veins dark brown. Outer medial veins without trichia; outer radial branches, including R_3 and R_4 , with conspicuous trichia. Venation: Cell 1st M_2 long, its inner end arcuated; cell M_1 present.

Abdomen brownish black, the tergites sparsely hairy; hypopygium more reddened.

Habitat. CALIFORNIA. *Holotype*: ♂, Pacific, El Dorado County, August 9, 1940 (L. C. Kuitert). *Paratopotypes*: 3 ♂♂ (L. C. Kuitert & L. J. Lipovsky).

The most similar species in *Hexatoma* (*Eriocera*) *solor* Alexander, which differs in the shorter male antennae, coloration of the body and legs, and in the trichiation of the wing veins.

Hexatoma (Eriocera) beameri new species

General coloration of entire body orange or chestnut, the thorax with the exception of the praescutum more pruinose; abdomen elongate, with a subterminal blackened ring; antennae with basal segments yellow, outer ones black; vertical tubercle deeply divided; femora black, bases narrowly yellowed; wings weakly tinged with brown, vaguely patterned with darker brown; veins unusually glabrous.

♂. Length about 12–14 mm.; wing 10–14 mm.; antenna about 3–3.4 mm.

♀. Length about 19–20 mm.; wing 14 mm.; antenna about 3 mm.

Rostrum short, yellow, narrowly blackened above; palpi brownish black. Antennae of male 7-segmented, of female 11-segmented, short in both sexes; basal three segments yellow, succeeding ones black; flagellar segments cylindrical, the first exceeding in length the succeeding two combined; setae short. Head orange, more pruinose on genae; vertical tubercle deeply divided into two halves by a narrow notch.

Pronotum light brown, pruinose. Mesonotal praescutum light chestnut, the lateral margins pruinose; scutal lobes chestnut in front; remainder of notum similar but the color more obscured by pruinosity. Pleura brownish yellow, sparsely pruinose. Halteres with stem yellow, knob dark brown. Legs with the coxae yellow to brownish yellow; trochanters yellow; femora black, the bases narrowly yellow; tibiae brownish yellow, tips narrowly blackened; tarsi passing from light brown to brownish black. Wings with a weak brownish tinge, prearcular, costal and stigmal areas slightly darker brown, in cases with a weak brown cloud over anterior cord and adjoining veins; veins pale brown, darker in the patterned areas. Veins unusually glabrous; a few scattered trichia on distal section of vein R_5 . Venation: Sc relatively long, Sc_1 ending shortly beyond level of $r-m$; R_{1+2} , R_2 and R_{2+3} all subequal; basal section of R_5 in cases twice as long as $r-m$; cell M_1 lacking; $m-cu$ at near one-third to one-fifth the length of the subrectangular cell $1st M_2$, longer than the distal section of Cu_1 .

Abdomen long in both sexes, fulvous, in some males with the posterior borders of the basal and intermediate tergites weakly darkened; segments six to nine chiefly blackened, with reddish tints; sternites chiefly reddish yellow, the seventh segment black, ninth sternite fulvous; other males and the female with the abdomen chiefly fulvous, with a subterminal blackened ring; genital shield fulvous, tipped with black; ovipositor with cerci long, sclerotized, blackened.

Habitat. TEXAS. *Holotype*: Concan, Uvalde County, July 6, 1936 (R. H. Beamer). *Allotopotype*: ♀. *Paratopotypes*: 3 ♂♀.

I am very pleased to dedicate this species to Mr. Raymond H. Beamer, Curator of the Snow Collection of the University of Kansas for many years, and most diligent collector of insects in many groups. The fly is quite distinct from anything in the Nearctic fauna, being more like *Hexatoma* (*Eriocera*) *obsoleta* (Williston), of Honduras, and a few allied forms in Tropical America, differing from all in every detail of coloration.

***Hexatoma* (*Eriocera*) *fulvomedia* new species**

General coloration of head fiery orange; vertical tubercle conspicuously bifid; antennae with basal and outer segments dark brown, the intermediate flagellar segments yellow; mesonotum with a broad orange or fulvous median stripe extending the entire length, the sides of the sclerites darker; pleura liver brown, more or less variegated by brighter areas; femora yellow basally, the tips broadly blackened; wings strongly darkened, especially the prearcular and costal fields; abdomen orange, in male with the terminal segments darkened, in the female with slight indications of dark color on tergites six and seven.

♂. Length about 11 mm.; wing 9.5 mm.; antenna about 2 mm.

♀. Length about 18–19 mm.; wing 13.5–15 mm.; antenna about 3 mm.

Rostrum and palpi brownish black. Antennae short in both sexes; in male, scape and pedicel light brown, flagellum obscure yellow; in female, scape and pedicel dark brown, base of flagel-

lum yellow, the terminal three segments dark brown; antennae 7-segmented in male, 9-segmented in female; flagellar segments with coarse setae but without spines. Head above, including the conspicuous bifid vertical tubercle, fiery orange; sides of vertex and genae dark brown, more extensively so in the male.

Pronotum dark brown. Mesonotal praescutum with the central area fulvous brown in female, less brightened in the male, evidently including a pair of more grayish intermediate stripes that are divided by a more reddened to infuscated line, best indicated in front; sides of praescutum brown; central region of scutum, including more than the inner half of each scutal lobe, the scutellum and the postnotum yellow or orange, most brilliant in the female. Pleura and pleurotergite more liver brown, in cases with vague more brightened areas on the pleurotergite and sternopleurite, in cases the latter more conspicuous. Halteres infuscated. Legs with the coxae dark brown, more or less pruinose, the fore pair more brightened apically; trochanters yellow; femora yellow basally, the tips broadly blackened, in the male more uniformly light brown; tibiae and tarsi brown, darker in the female. Wings strongly darkened, especially the prearcular and costal fields; less evident darkened seams over the radial field and along vein *Cu* in cell *M*; veins brown. Veins beyond cord virtually glabrous except for very sparse trichia on distal section of vein R_5 . Venation: R_{1+2} subequal to or a little shorter than R_{2+3} ; fork of *Rs* acute; cell M_1 lacking; *m-cu* about one-third to one-half times its length beyond the fork of *M*.

Abdomen orange, in male with the fifth and succeeding segments dark brown to form a broad ring, in the female this merely indicated by darkened areas on segments six and seven, not or scarcely including the whole segment; genital shield of female orange, yellow pollinose; ovipositor with cerci relatively short and stout, straight.

Habitat. ARIZONA. *Holotype*: ♀, Chiricahua Mountains, Cochise County, July 8, 1932 (R. H. Beamer). *Allotopotype*: ♂. *Paratopotypes*: 5 ♀♀, July 4, 1940 (R. H. Beamer, D. Elmo Hardy and L. J. Lipovsky), July 3, 1947 (R. H. Beamer).

There is no very close relative in the Nearctic fauna. It appears to be most nearly allied to *Hexatoma (Eriocera) rubri-nota* (Alexander), despite the different coloration.

***Hexatoma (Eriocera) velveta apache* new subspecies**

Very similar to the typical form in the short stiff black erect to subproclinate bristles on the vertex and the virtually glabrous mesonotum. Lateral praescutal stripes and darkened areas on scutal lobes much less conspicuous, dark gray instead of brown. Legs black, the proximal third (fore legs) to half (hind legs) of the femora yellow. In typical *velveta* only the femoral tips are darkened.

Habitat. NEW MEXICO. *Holotype:* ♂, Mescalero Apache Reservation, Sacramento Mountains, near Cloudcroft, Otero County, 7,000 feet, June 1, 1942 (C. P. Alexander).

***Hexatoma (Eriocera) dorothea* new species**

General coloration gray, the praescutum and scutum patterned with black; antennae of male 8-segmented; vestiture of head long, black, of the praescutal interspaces long and pale; legs black, the femoral bases rather narrowly yellow, including about the proximal half; wings brownish yellow, with a restricted darker brown pattern; macrotrichia of veins very sparse; cell 1st M_2 elongate, its inner end arcuated.

♂. Length about 13 mm.; wing 13 mm.; antenna about 3 mm.

Rostrum and palpi black. Antennae of male 8-segmented, black throughout; first flagellar segment about as long as the succeeding two combined, with about four strong bristles; remaining segments with fewer such bristles; terminal segment subequal in length to the penultimate. Head dark brown behind, more pruinose on genae and in front, including the vertical tubercle; anterior vertex broad, the eyes correspondingly small; vestiture of head black, relatively long and conspicuous, longer than in *velveta*.

Prothorax gray, dark brown on sides. Mesonotal praescutum light gray with four conspicuous nearly black stripes,

the intermediate pair separated by a ground area that is fully one-half as wide as either stripe; lateral border behind the fovea not darkened; interspaces with abundant long pale setae; posterior sclerites of notum light gray, each scutal lobe with a conspicuous dark brown area; postnotum glabrous. Pleura gray; dorosopleural membrane dark brown. Halteres with stem light brown, knob dark brown. Legs with the coxae gray pruinose, with long pale setae; trochanters dark brown; remainder of legs black, the femoral bases yellow, including about the proximal half only, still narrower on the fore legs. Wings brownish yellow, with a restricted darker brown pattern, including the stigma and narrow seams at origin of R_s , over cord, and at outer end of cell $1st\ M_2$; veins brown. Macrotrichia of veins very sparse, beyond the cord and behind R_1 including only a sparse series over most of the length of the distal section of vein R_5 . Venation: Sc_1 ending shortly before the fork of R_{2+3+4} , Sc_2 opposite midlength of this vein; R_{1+2} about three times R_2 ; cell $1st\ M_2$ elongate, its inner end arcuated, about in transverse alignment with cell R_4 , the cell about equal in length to the distal section of vein M_{1+2} ; cell M_1 lacking; $m-cu$ at near two-fifths M_{3+4} or nearly in alignment with $r-m$.

Abdomen black, gray pruinose; transverse basal impressions of the tergites black, distinct.

Habitat. OREGON. *Holotype:* ♂, Happy Valley, near McMinnville, Yamhill County, May 12, 1946 (Kenneth M. Fender).

I am very pleased to name this species for Mrs. Dorothy McKey-Fender (Kenneth Mark Fender), student of the western American Annelids and certain groups of fire-flies. The type specimen had been recorded earlier (Amer. Midl. Nat., 51: 68, 1954), as being *Hexatoma (Eriocera) velveta* (Doane), which is the nearest ally, differing in the nature of the vestiture of the head and thorax, coloration of the legs, and in the venation. It is now apparent that various species have been confused under the name of *velveta*.